

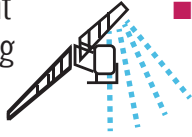
STANDARD OPERATING PROCEDURES: CALIBRATION: BOOM SPRAY

Poor control results are, in most cases, due to incorrect calibration and not the product!

STEP ONE Carry out basic equipment checks



- Ensure equipment is in good working order



- Ensure the correct nozzle is selected

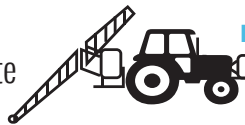


- Check for blockages, leakages and damage. Ensure all nozzles are the same type and size and correctly spaced

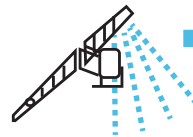
STEP TWO Calibration requirements



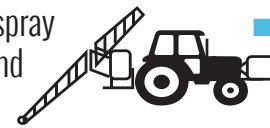
- Chemical dosage rate



- Size of the spray tank



- Nozzle spray width and output

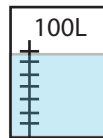


- Tractor speed and gear

STEP THREE Speed - do this exercise three times over the same terrain that will be sprayed and calculate the average



- Measure 100m

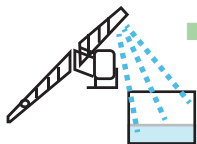


- Pour 100L of water into the tank

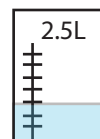


- Decide on a suitable tractor speed and spray pressure, select a gear and engine speed to maintain this. Measure the time the tractor takes to cover 100m

STEP FOUR Nozzle output - do this procedure three times and calculate the average



- While stationary, run the sprayer at the same engine revolutions and pressure it used while covering the 100m in Step Three



- Measure the amount of water from each nozzle for the average time period in Step Three

STEP FIVE Calculate the volume applied (VA)

$$VA = \frac{10\,000 \times \text{Nozzle output (L)}}{\text{Distance Walked (m)} \times \text{Boom swath (m)}}$$

$$VA = \frac{10\,000 \times 20L}{100m \times 4m}$$

$$VA = \frac{200\,000L}{400m}$$

$$VA = 500 \text{ L/ha}$$

EXAMPLE

- Boom swath (from ALL nozzles) 4m
- Total output from all nozzles 20L

STEP SIX Calculate the amount of chemical needed

$$\text{Chemical volume (CV)} = \frac{\text{Tank size} \times \text{Dosage rate}}{\text{Volume applied}}$$

$$CV = \frac{300 \times 0.5}{500}$$

$$CV = \frac{150}{500}$$

$$CV = 0.3L$$

$$CV = 300\text{ml pesticide per tank}$$

EXAMPLE

- Tractor tank 300L
- Dosage rate 0.5L/ha